
**SYSTEM AND METHOD FOR SELECTIVELY EXPANDING OR
CONTRACTING A PORTION OF A DISPLAY USING EYE-GAZE TRACKING**

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ABSTRACT OF THE INVENTION

A computer-driven system amplifies a target region based on integrating eye gaze and manual operator input, thus reducing pointing time and operator fatigue. A gaze tracking apparatus monitors operator eye orientation while the operator views a video screen. Concurrently, the computer monitors an input indicator for mechanical activation or activity by the operator. According to the operator's eye orientation, the computer calculates the operator's gaze position. Also computed is a gaze area, comprising a sub-region of the video screen that includes the gaze position. The system determines a region of the screen to expand within the current gaze area when mechanical activation of the operator input device is detected. The graphical components contained are expanded, while components immediately outside of this radius may be contracted and/or translated, in order to preserve visibility of all the graphical components at all times.